

How to LIGHT YOUR HOME



FOREWORD

by EMILY POST

Author of "Etiquette," "The Personality of a House," etc.

To a hostess of other days, light was an item of hospitality that required many tasks of trimming wicks and filling lamps, and at one time the making of candles as well.

Today, electric lighting has replaced all that. But many hostesses who pay attention to every other detail of perfection, are only just beginning to discover that perfect lighting is an outstanding element of beauty, cheer and comfort without which the atmosphere of the most beautiful house is dim, silent, uninviting. No hostess can create an atmosphere of friendly gayety, so essential to the spirit of a party, in the glimmering gloom. To begin with, a brightly lighted entrance path and door not only show the bell and house number, but show that friends are expected; the opening of the door into a

well lighted hall is a further welcome, and proper lighting of the mirror in whichever room serves as a dressing room, a prepcomfort. aration of Furthermore, the smiling welcome of the hostess is echoed by the smiling appeal of a living room which is cheerful and lovely in color and warm in light. Whether the evening be spent at the bridge tables, or in dancing, or in playing old-fashioned games; or whether the party be a formal one and professional entertainment be provided, ideal lighting to fit each one of these needs is not merely a decoration but an essential.

In short, lighting from the point of view of comfort no less than as an aspect of greatest beauty, is a factor which no hostess may overlook if she would achieve those qualities of inviting charm without which no house is truly—Home.

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Know More About Seeing Before You Light Your Home

Perhaps no development in recent years has so stirred the imagination of those interested in home lighting as has the New Science of Seeing.

Reduced to its simplest form, this new approach to an old problem forms a partnership for the first time between light and vision. Heretofore the lighting engineer has often thought of seeing in terms of light; while the eye specialist has usually thought of it in terms of eyes. The new point of view recognizes the fact that while people generally may not be interested in lighting, or even in their eyes, they are emphatically interested in the result of the partnership of the two—Better Sight.

Because the visual sense dominates the behavior of human beings, it is largely responsible for most of our usefulness and happiness, and consequently provides an intensely interesting background for a study of adequate home lighting. One important discovery made by the General Electric scientists resulted in establishing the fact that even easy tasks relating to seeing produce nervous muscular tension (fatigue). Reading a book was chosen as a typical task since it is a far less difficult visual task than sewing, darning, or similar tasks in the home. And yet under the best conditions tested,

some nervous muscular tension was always definitely measurable. And as the light was reduced, the nervous muscular tension of the person tested steadily increased. For example, when the pages of the book were illuminated with an intensity representing average conditions of light in many homes, nervous muscular tension was three times greater than when the intensity was equivalent to that in a window during the daytime. Other conditions of seeing were also studied. Glaring light sources, still too common in the average home, were found to produce tension as severe as those experienced under low levels of illumination.

Some other interesting facts that the researches in seeing have established are the following:

THAT one-fourth of grade school children suffer from defective vision;

THAT if a child has to hold the book he is reading closer than 14 inches, the chances are his eyes are being strained—the remedy is eye-glasses or better lighting, or both;

THAT the pupil of the eye becomes smaller with age—consequently, the need for more light as birthdays pile up;

THAT three-fourths of all people over 50 suffer from defective vision—inadequate light is a prominent cause;

THAT good lighting aids defective eyes even more than it does normal eyes;

THAT reading with the page brightly illuminated and the rest of the room comparatively dark often causes unnecessary eyestrain and fatigue—let some light go to the ceiling.

THAT it takes three times as much light to read a newspaper with the same ease as it does a well-printed book;

THAT an additional quantity of light is no substitute for the services of an eye specialist —but it is a tool just like eyes and eye-glasses. Every housewife is familiar with the common measuring sticks of the things with which she has to do—except the tremendously important task of adequate seeing. A bushel of A quart of milk. A pound of potatoes. sugar. Sixty-eight to seventy degrees of heat. Now here is a simple way to understand a unit of lighting intensity. Think of a candle stuck in the neck of a bottle. Think of the amount of light that candle gives at a distance of one foot—put the two words Footcandle. Just as there are together. standard instruments to measure the more familiar household units, there is also an instrument which measures amounts of light in footcandles. A hand-size model called the Sight Meter is available for indoor use and

measures light in terms of visual need. With this unit in mind, let us consider the wide differences which exist between light sources. Outside on a clear day in midsummer, the light is equal to 10,000 of these footcandles. On an overcast day this intensity may drop to 1,000 footcandles. On the sunny days that you spend on the front porch reading and sewing you still enjoy the light of 500 of these footcandles. Now let us see what happens when we move indoors. First, if we sit at the window, in the daytime, the light will vary from 100 footcandles up to several hundred, depending on what sort of day it is outside. But now night comes and we turn on the lights. What happens?

We find the average person performing visual work with about five footcandles and many a person struggling with only the equivalent of two candles, stuck in a bottle top! These we know are below the levels for good and easy seeing and do not aid in the preservation of healthy sight. Certainly they are insignificant in comparison with out-of-door light which Nature provides for us and under which our eyes evolved. On the following pages will be indicated the quality and quantity of lighting which should be achieved in the modern home, with suggestions and recipes for attaining them.

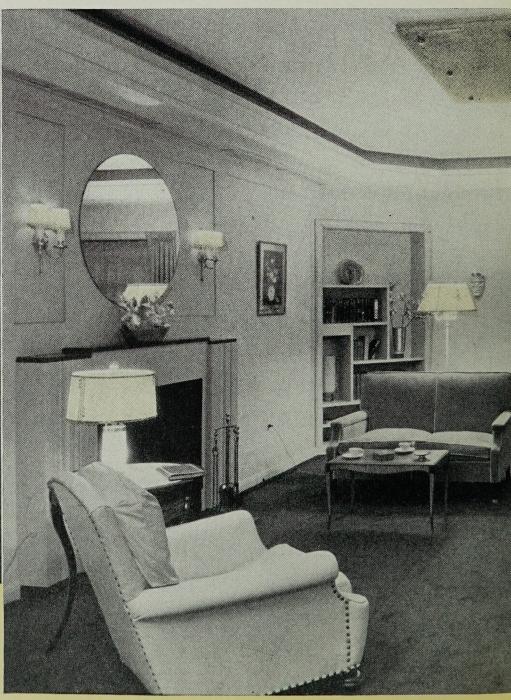
... How to Light

Since your living room is the center of home life and the setting for a diversity of family activities, its lighting arrangement must be flexible to fulfill its wide range of living requirements. Floor and table lamps go far toward the solution of these requirements in that they may be depended upon not only for interesting decoration, but for useful local and general light. They should be used to complete each furniture grouping, and are also more effective when placed to maintain balance with one another.

Height of base and spread of shade must be considered in their selection, so that the light will fall where it is needed and never toward the eyes. Shades should usually be open at the top and light colored with very light linings.



Portable lamps for reading or sewing, placed at the side, must be tall enough, and employ shades of sufficient spread at the bottom to give a wide spread of light. Shades should be light in color and open at the top to brighten the whole area surrounding the lamp. Above, an I. E. S. Better Sight Lamp serves to excellent advantage.



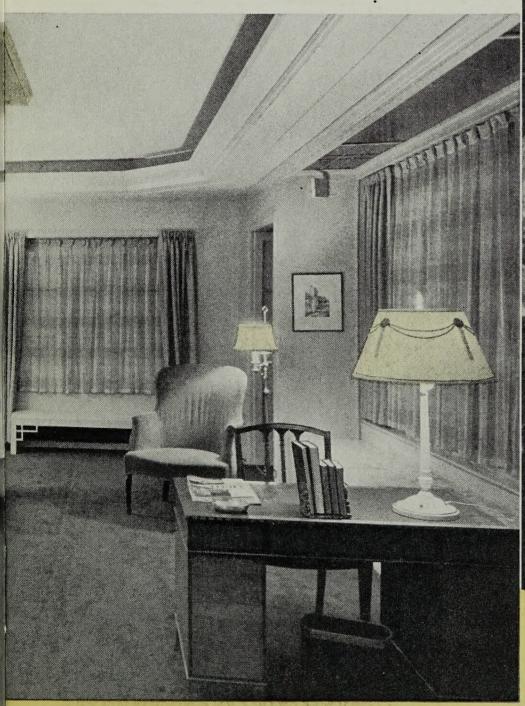
The lighting ensemble for the well-lighted living room affords general illumination from the center fixture and local illumination for each furniture grouping.

Your Living Room

For the festive occasion and for times when more general lighting is needed, a correct ceiling fixture is essential. For the modern room of low ceiling, the fixture should hang close to the ceiling and encase the lamp bulbs. With a higher ceiling, a fixture with longer pendant may be used. Good examples of both types are illustrated. When no provision has been made for a ceiling fixture, similar lighting results may be obtained from the indirect portable lamp.

Wall brackets, too, have their special contribution. Their chief right to exist in most living rooms is to supply vital spots of ornament. They must always be shaded, and placed in balanced arrangements.

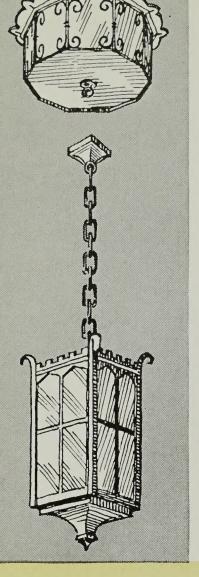
> Center Fixture—Total of 150 to 200 watts Portable Lamps—See recipes, page 18 Wall Brackets—15 or 25 watts



Lamps and fixtures are selected both for their decorative harmony and sufficient light for seeing. Both the desk and davenport are lighted with I. E. S. Better Sight lamps.



Whenever possible, the writing desk should be placed where daylight from a window may be employed in the daytime. The lighting source should be at the writer's left-otherwise, shadows will be cast on the paper by the right hand. Here a semi-indirect lamp employing a 2-filament MAZDA Indirect Three-Lite lamp provides a choice of three intensities of light.



How to Light Your Hall

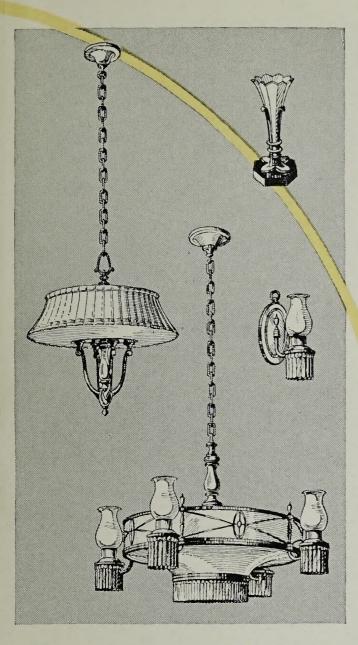
Your guests' first impression of the character of your home is gained in your hall. A lantern type, with diffusing glass panels for a soft quality of lighting, or shaded candle type fixture, usually proves pleasing, although a fixture which hangs closer to the ceiling is often preferable in the extremely small hall. The fixture selected should direct sufficient light to the ceiling so that the hall area will be softly but generally well lighted. The stairway particularly should receive ample light to avoid the possibility of accident. The telephone table, when located here, needs a small lamp or a wall lamp or bracket above it.

Delightful decorative notes may be added by floor torchieres, a table lamp placed conveniently near the mirror, or wall brackets.

Center Fixture—Total of 40 to 60 watts
Torchieres—See recipes, page 18
Table Lamps—See recipes, page 18
Wall Brackets—25 or 40 watts

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How to Light Your Dining Room

The five or six-light candle fixture is adaptable in appearance and popular in use for many dining rooms. It will give satisfactory results only when shaded. The correct shading of the lamps directs the light downward upon the table and produces a pleasing soft light. The dome types are suitable when hung about 24 inches from the table, thus avoiding any possibility of the direct harsh light striking the faces of those seated around it.

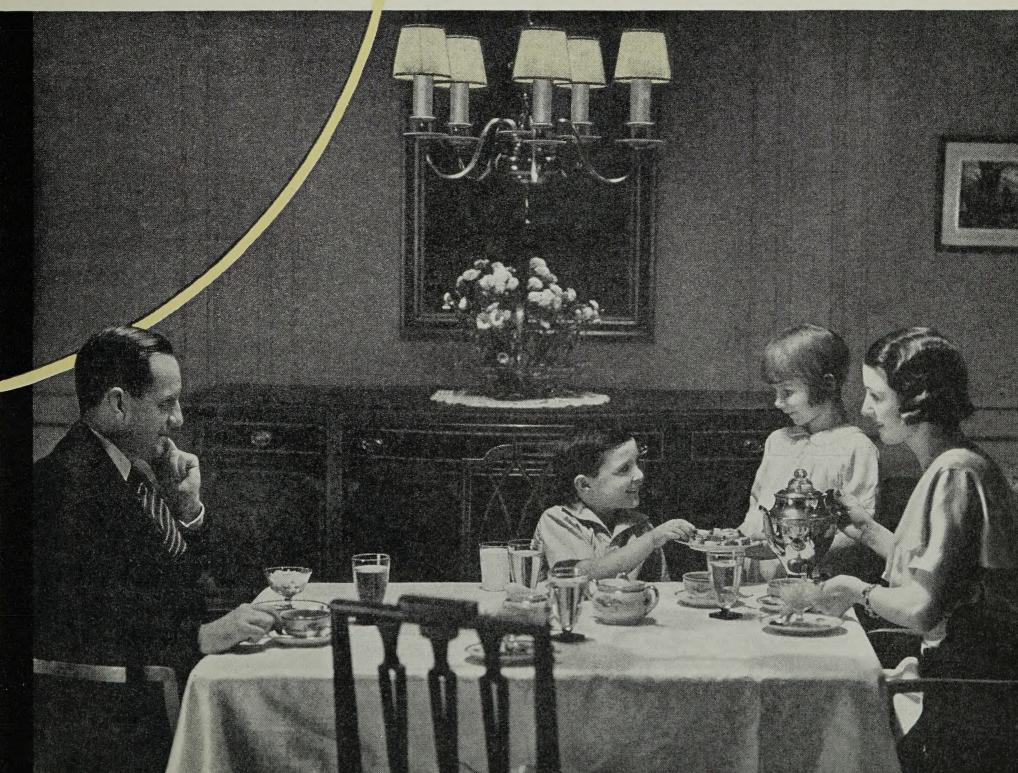
Wall brackets create a desirable background for those occasions when candles are chosen to light the table. Lighted ornaments are charming for the buffet.

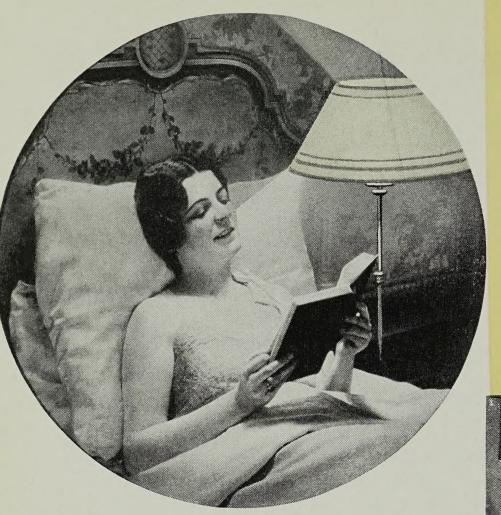
The dining room is adaptable to the more theatrical effects and accordingly fixtures especially designed to incorporate more than one lighting effect are often desirable. The sketch shows one of this type executed in Colonial design.

Center Fixture—Total of 100 to 200 watts

Wall Brackets—15 or 25 watts

Ornaments—10 or 15 watts





Lighting Your Bedroom

The lighting of the bedroom may be the real determining factor in the possible luxury of its livableness. Whether one is dressing to go out, reading abed, or just busying about, the right light placed where it is truly of service means genuine comfort.

The center fixture has a legitimate place in bedrooms for there are certainly times when greater amounts of light are needed than are obtainable from the portable lamps. It must be shaded to assure pleasing surroundings and eye-comfort.

The bed lamp may be the wall, table, or floor type, but its shade must be very light in color and it should cast a wide circle of light which does not strike the eyes. Above, an I. E. S. Better Sight lamp, floor model, is used.

The dressing table or bureau needs its special lighting which is furnished by a pair of boudoir lamps tall enough to be at face height in relation to the mirror.

Clothes closets should have their own light provided by a bracket light inside and above the door on the opening side.

Center Fixture—Total of 100 to 150 watts

Boudoir Lamps—See recipes, page 18

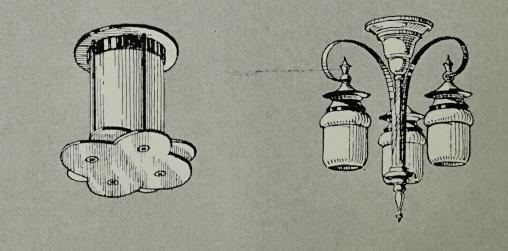
Bed Lamp—See recipes, page 18

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Lighting for Seeing

Reading in bed cannot be recommended unless the lighting produces easy seeing. And certainly no dressing table can be called convenient unless it is provided with the special lighting it needs.





How to Light your Bathroom

The first requirement of bathroom lighting is that there shall be abundant and suitably distributed light at the mirror. This light should be planned to light the face without casting heavy disfiguring shadows. This is best accomplished by two upright brackets, one on each side of the mirror, placed so that the lamp bulb, shaded with diffusing glassware, is about 5 feet 6 inches from the floor, average face height. Some of the newer brackets utilize 40-watt

MAZDA tubular lamps in diffusing glass tubes, so lighting the face of the person at the mirror that they make better provision for variation in heights.

Exceptionally large or dark-colored tiled bathrooms should have an additional light at the ceiling, preferably from an enclosing glass fixture. Oftentimes the shower or tub stall needs its own light.

Center Fixtures—Total of 60 to 100 watts
Wall Brackets—40 or 60 watts each



How to Light your Kitchen

The cheerfulness and efficiency of your kitchen is very dependent upon the kind of lighting you plan for it. Here, as in the work places of the industrial world, it has been found that the ease, speed, and thoroughness with which work is done will vary directly with the quantity and quality of light available. With these facts in mind the standard recipes which follow have been formulated for the kitchen. The first ingredient is a single diffusing glass enclosed unit—at least 9 inches in diameter—at the center of the ceiling. Light-colored walls and ceiling assist in directing much of the light from this unit downward, and minimize shadows. However, shadows are almost inevitable at the sink, which should therefore have its individual

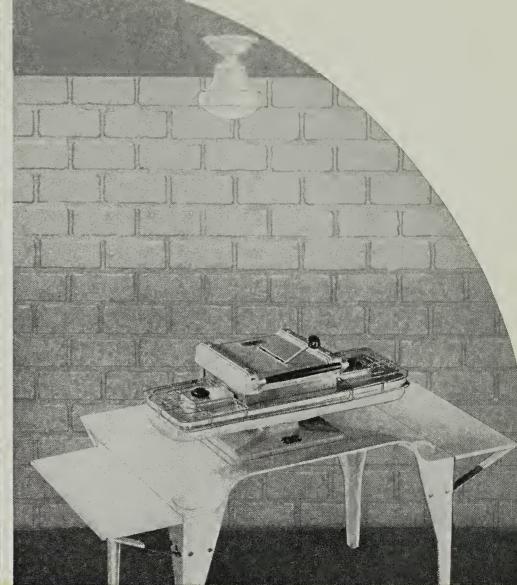
light. A wall-bracket or a pendant fixture hung 5 feet from the floor and equipped with a glass shade, serves the purpose, although a small duplicate of the center fixture placed at the ceiling over the sink is less conspicuous. A similar recommendation for the range is desirable, particularly in large kitchens. When a MAZDA Daylight lamp is used in the center fixture, Daylight lamps should also be used for the sink and range fixtures.

Carefully planned lighting not only adds to the efficiency of your kitchen, but makes it a pleasanter and more cheerful place in which to work.

Center Fixture—Total of 100 to 150 watts
Wall Brackets or Pendant Fixtures—40 or 60 watts







How to Light your Laundry

Just as a costume is not complete without the proper hat, gloves and shoes, so the laundry is not complete without modern lighting and electrical equipment. Even with the aid of the electric iron, washing machine and mangle, women have, at times, experienced the need for taking clothes to the daylight to make sure that they are free from all stains. Actually daylight may be a part of the laundry even on the darkest days if it is equipped with Daylight lamps enclosed in light diffusing white glass globes. Daylight lamp gives off a whiter light than the insidefrosted lamp. Therefore, when ironing, the first sign of scorch is easily detected and likewise stains are more quickly seen. You will find that the aspect of your laundry will take on new cleanliness and cheer if Mazda Daylight lamps are used as light sources.

Daylight lamps equipped with light diffusing white glass globes should be used for local as well as for

general illumination in the laundry. One such unit should be located directly above the tubs, so that light from it may illuminate your work directly, without the possibility of your standing in your own light. Other Daylight lamps enclosed in light diffusing white globes should be located above the ironing board and electric ironer. Here again, efficient, untiring work can be accomplished only in the event that the nervous system is not subjected to the necessity of groping in one's own shadow or in the semi-twilight of too low a level of illumination.

Good laundry lighting is so easily accomplished, with so little expense, that in every home it should be provided to co-operate with the modern laundry appliances that have done so much to eliminate washday drudgery and make laundering a pleasant duty.

Ceiling Fixtures—150-watt MAZDA Daylight
lamp in each socket

Guarding the Eyes of Youth





There must never be any possibility of subjecting young eyes to uncomfortable brightness nor of depriving them of suitable quantities of light.

To this end, children's rooms require central fixtures of either the indirect or dense semi-indirect types. These are designed to throw the light to the ceiling (light-colored for good results) which reflects the light thus softened throughout the entire room. The play room is an ideal location for the Mazda Sunlight lamp. The study room desk should be equipped with an I. E. S. Better Sight Lamp. The sleeping room should have its bedside lamp, even for little tots, as a comforting protection against uneasiness in the dark.

Center Fixture—Total of 100 to
200 watts

Study Lawren See recipes made 1

Study Lamps—See recipes, page 18



sunlight, even on the brightest winter days. The ultra-violet rays are shut off by smoke, by the increased areas of atmosphere through which sunlight has to pass in reaching us, and by the heavy clothing that we are compelled to wear.

With the MAZDA Sunlight lamp, you can have ultra-violet at the touch of a switch. In the special fixture required for its operation, this lamp, at 24 to 30 inches from the subject, radiates ultra-violet equivalent to that of the best midday, midsummer sunshine, and it can be used safely in the nursery, and elsewhere in the home. It is odorless and smokeless; it furnishes good light, and it does not make the wearing of goggles necessary.

With a MAZDA Sunlight lamp in your home you can have the benefits of ultra-violet radiation while you relax or bathe.

Lighting for Health

The need of indoor sunshine is rapidly becoming generally recognized, for sunshine combines with fresh air and exercise to contribute to the abundant health we all desire. Science has discovered that the ultraviolet rays in sunshine activate the development of Vitamin D, which assists in promoting the growth of strong bones and sound teeth, and is useful in the prevention or cure of rickets in children.

During the winter months most people have few opportunities for obtaining the benefits of bright outdoor sunshine. In northern climates there is little ultra-violet in natural





Light for Comfort

To put up with whatever sort of lighting may exist in your home is a habit easily acquired. But modern

home lighting may provide so much comfort and cheer within your home, for your guests as well as for the members of your immediate family, that to deprive yourself of *good* home lighting is as unnecessary as it is regrettable.

On this page are two specific examples of the part good lighting may play in making your entire home more comfortable and more livable. Above, a gloomy corner that actually discouraged rather than invited reading, has been transformed into an interesting furniture group that is both useful and attractive, by changing to a comparatively plain shade with an open top. The lamp base and the furniture are the same, in the larger picture, but how much more cozy

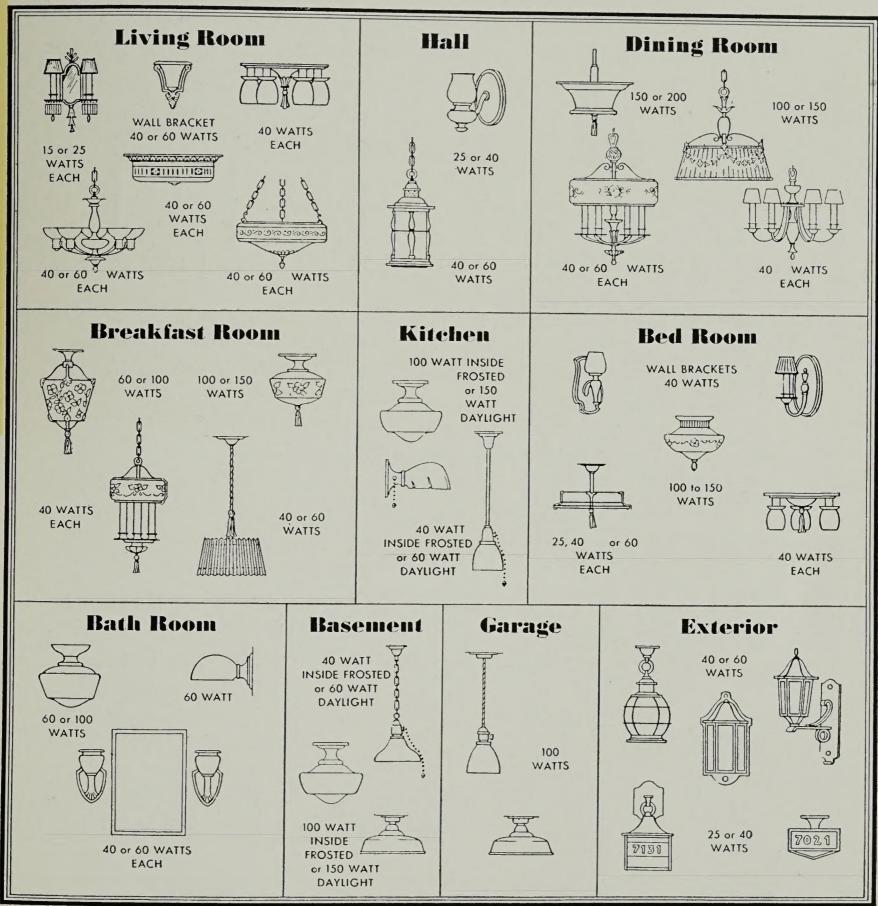
and comfortable proper lighting has made this group!

The indirect lamp makes possible the use of more light, both effectively and attractively, for many a lighting need in the home. For example, it has solved the problem of generous yet flattering light for everyone at a game of bridge, as the contrasting photographs il-





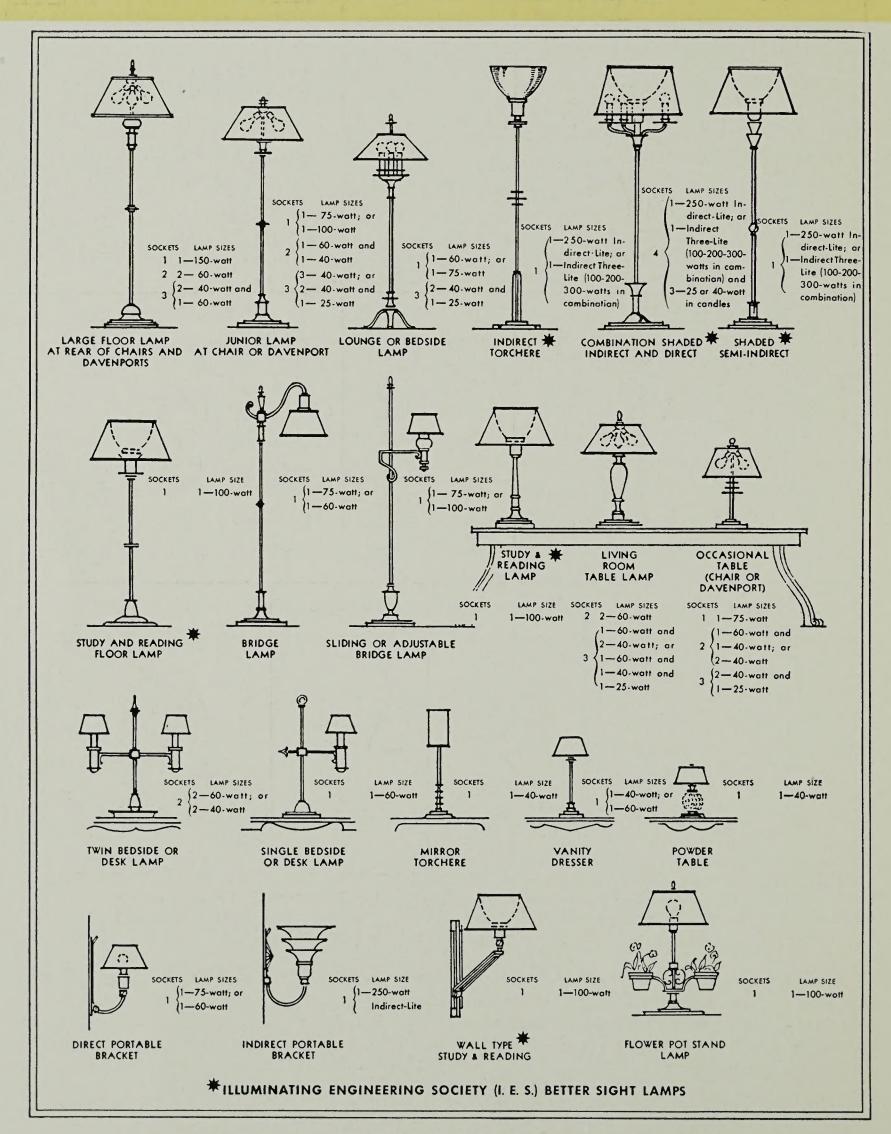
Mazda Lump Recipes for Lighting Fixtures



All recipes are for standard inside frosted MAZDA lamps, excepting in the cases of kitchen and laundry, where the inside frosted MAZDA daylight lamp is prescribed.

You should buy the lamps that light your home with the utmost eare. Why? Because the quality and efficiency of the lamp determines how conomically you seeure good light. While all lamps may look about alike, some are so designed and constructed that they produce much more light for a given amount of current than do lamps of inferior and haphazard construction. Since lamp quality can be determined only by laboratory measurements and actual life tests, which are impossible for you to make, your only safeguard is the trade-mark of a manufacturer in whom you have confidence. Electricity is not only a wonderful servant but one of the least expensive. Use it wisely by burning lamps that give you all the light you pay for.

Mazda Lamp Recipes for Portable Lamps



Footcandle Recommendations for the Home

Recommendations based upon the research of M. Luckiesh and Frank K. Moss, Lighting Research Laboratory, Nela Park, Cleveland, Ohio

The following footcandle recommendations are conservative, when appraised upon a basis of seeing and human welfare.

The common household candle provides an intensity of about one footcandle of light on an open book, the pages of which are not more than one foot square, when the book is held one foot away from the candle.

100 Footcandles or More

For very severe and prolonged tasks, such as fine needle-work, sewing on dark goods, and discrimination of fine details of low contrast.

50 to 100 Footcandles

For severe and prolonged tasks, such as difficult reading, average sewing and other needle-work.

20 to 50 Footcandles

For moderately critical and prolonged tasks, such as ordinary reading, average sewing and other needle-work on light goods.

10 to 20 Footcandles

For ordinary reading and sewing on light goods, when not prolonged

5 to 10 Footcandles

For visually controlled work in which seeing is important, but more or less interrupted or casual, and does not involve discrimination of fine details or low contrast.

0 to 5 Footcandles

The danger zone for severe visual tasks, and for quick and certain seeing. Satisfactory for perceiving larger objects and for casual seeing.

Bringing the portable lamp closer to the work or using larger lamp bulbs will produce higher intensities of illumination. For example, a good bridge type portable will produce between 10 and 20 footcandles when it is 36 inches from the work, using a 75-watt lamp. By moving it to within 1 foot of the work it will produce 100 footcandles. When used in this manner to produce higher intensities of illumination, shades of low translucence are recommended and generous amounts of general lighting throughout the room should be provided.

These precautions can also remove the erroneous feeling that there is too much light.

In the cases of those lamps listed on page 18 that would normally be used for reading or other comparable eye work, wattages given are those necessary to produce on the book or work, levels of light suitable for reading normal print (10 to 20 footcandles). In the case of dark or poor reflecting shades, the listed wattages will have to be increased. Variations in the wattages given for a single lamp are purposely introduced to compensate for varying distances of the lamp from the work and to allow for some flexibility in the use of the lamp. For example, in multiple socket lamps one low-wattage lamp is suggested so that it may be used for a low intensity to relieve contrasts or when the room is not occupied. The greatest number of sockets is most desirable in each case, because of the greater flexibility of lighting which may be achieved by lamps so equipped.

